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a second image-formation system for separating the plural light beams deflected by said optical deflector from each other in a direction of auxiliary scanning on a scanned surface and converging the plural light beams as a plurality of light spots for optically scanning said scanned surface in accordance with deflection of the plural light beams;

wherein

the plurality of light spots on the scanned surface optically scan scanning lines adjacent to each other on plural consecutive scans, and

a lateral magnification β in a direction corresponding to the auxiliary scanning of the optical scanner is as follows:

$2 < \beta < 8.5$.

REMARKS

Favorable reconsideration of this application, in view of the present amendment and in light of the following discussion, is respectfully requested.

Claims 1-7 and 10-15 are currently pending in this application. Claims 1 and 12-15 have been amended herewith in compliance with the standard for amendments in re-issue applications.¹ Each of those claims has been further amended to recite "the plurality of light spots on the scanned surface optically scan scanning lines adjacent to each other on plural consecutive scans." This feature is not believed to be taught by the prior art as discussed below.

¹Although not objected to in the outstanding Office Action, a review of previously amended Claim 5 indicates that it was not amended in light of the standards for re-issue applications. It has been re-submitted herewith without additional changes for the benefit of the printer.

In the outstanding Office Action, claims 1-15 were rejected under 35 U.S.C. § 112, first paragraph, as not being supported by an adequate written description; claims 1-6 and 10-15 were rejected under 35 U.S.C. § 102(a) as being anticipated by Appel et al., U.S. Patent No. 5,550,668 (hereinafter "the '668 patent"); claims 1-6 and 10-15 also were rejected under 35 U.S.C. § 102(a) as being anticipated by Genovese, U.S. Patent No. 5,526,166 (hereinafter "the '166 patent"); and claim 7 was rejected under 35 U.S.C. § 103(a) as being unpatentable over the '668 patent or the '166 patent in view of Kamikubo, U.S. Patent No. 5,861,978 (hereinafter "the '978 patent").

The courtesy of a personal interview extended to Applicants' representative on December 12, 2000 is respectfully acknowledged. During the interview, claim 1 was discussed with reference to the '668 patent. During the interview, Applicants' representative pointed out the relevance of the amendment, and the Examiner discussed his interpretation of col. 5, lines 54-55 of the '668 patent. However, no agreement was reached, no exhibits were shown and no demonstrations were conducted.

In response to the rejection of claims 1-15 under 35 U.S.C. 112, first paragraph, Applicants respectfully traverse the rejection. In light of the discussions during the interview and to insure that the record is clear, Applicants herewith have addressed the rejection as both a rejection for lack of enablement and inadequate written description. As to the question of enablement, Applicants have filed concurrently herewith a Supplemental Declaration under 37 C.F.R. 1.132. This declaration, made by an expert that is an employee of the assignee of the present invention, addresses the statements in the Office Action that allege that the initially filed declaration is insufficient.

As to the question of adequate written description, it is believed that Applicants may meet the adequate written description requirement without reciting all of the elements disclosed in their specification. In Reiffin v. Microsoft Corp., 54 USPQ2d 1915 (Fed. Cir. 2000), Judge Newman of the Federal Circuit stated in her concurring opinion that:

It is standard for applicants to provide claims that vary in scope and in content, including some elements of a novel device or method, and omitting others. See Irving Kayton, 1 Patent Practice (6th ed.) 3.1, 3.3 (1995)....

Moreover, Judge Newman further cited 3 Lipscomb's Walker on Patents 290-91 (1985) which states that:

[A] claim may cover an invention embracing the entire process, machine, manufacture, or composition of matter which is described in the specification, or it may cover such sub-processes or such sub-combinations of the invention as are new, useful and patentable. See, e.g., Special Equipment Co. v. Coe, 324 U.S. 370 (1945) (reversing the rejection of a sub-combination claim directed to the previously claimed invention less one element). While the specification must of course describe the claimed invention, it is well established that the claims need not include every component that is described in the specification. See Aro Mfg. Co. v. Convertible Top Replacement Co., 365 U.S. 336, 345, 128 USPQ 354 (1961) (There is "no legally recognizable or protected 'essential' element . . . in a combination patent.>").

Accordingly, it is respectfully submitted that the rejection under 35 U.S.C. § 112, first paragraph, should be withdrawn.

In response to the rejection of Claims 1-6 and 10-15 under 35 U.S.C. § 102(a) as being anticipated by the '668 patent, that ground for rejection is respectfully traversed. The Office Action asserts that the multi-beam scanner of the '668 patent has a lateral magnification of 127/5.5 or 5.08. However, the discussion (col. 5, lines 35-55) of the image configuration was made with reference to an interlaced image having a scan line interface

factor of 3. Thus, the actual distance between adjacent lines, as shown in Appendix A, is $127 \mu\text{m}/3$ or $42.3 \mu\text{m}$. Accordingly, the actual lateral magnification is $42.3/25$ or 1.7 , which falls outside the recited range of $2 < \beta < 8.5$.

Although the Office Action also cites col. 5, lines 54-55, that cited section simply states that "the scan lines can form consecutive, or in-pitch, scan lines." Even so, as shown in Appendix B, consecutive lines are $42.3 \mu\text{m}$ apart. Thus, such scan lines would also correspond to a magnification of $42.3 \mu\text{m}/25 = 1.7$. This too is outside of the claimed magnification range.

Accordingly, according to the system of the '668 patent, neither adjacent nor interlaced scanned lines provide the magnification recited in the claims. Thus, that ground for rejection should be withdrawn.

In response to the rejection of Claims 1-6 and 10-15 under 35 U.S.C. § 102(a) as being anticipated by the '166 patent, that ground for rejection is respectfully traversed in light of the present amendment. The outstanding Office Action asserts that "in a first scan the scanning lines on the scanned surface 64 are adjacent one another." However, the Office Action has not asserted that plural scanning lines are adjacent each other on plural consecutive scans as now recited in the independent claims (i.e., "the plurality of light spots on the scanned surface optically scan scanning lines adjacent to each other on plural consecutive scans"). Such a limitation is believed to be patentably distinguishing over the interlaced configuration of the '166 patent.

In response to the rejection of claim 7, it is respectfully noted that claim 1 is believed to be patentable over the cited prior art for the reasons set forth above. Accordingly, all claims which depend therefrom, including rejected claim 7, are believed to be patentable.

In addition to the reasons for patentability discussed above with reference to the independent claims, claim 6 is further patentable for the reasons set forth below. The outstanding Office Action has incorporated by reference the previous Office Action's position that the lengthy lens recited in claim 6 is taught by the second scan lens 94b and scan lens 80 in the '668 and '166 patents, respectively. However, that assertion is respectfully challenged. As defined in Applicants' specification:

The lengthy lens is a lens having [the] function of correcting surface offset each in the optical deflector and curve of an image surface such as a lengthy cylinder lens or a lengthy toroidal lens or the like. col. 2, lines 65-68.

Applicants are entitled to be their own lexicographers. See Multiform Desiccants, Inc. v. Medzam, Ltd., 133 F.3d 1473, 1477, 45 USPQ2d 1429, 1432 (Fed. Cir. 1998) (observing that an inventor, acting as a lexicographer, may bestow "a special meaning to a term in order to convey a character or property or nuance relevant to the particular invention."). Applicants have done so here.

The lengthy lens of the present invention is utilized to correct the majority (on the order of 95%) of the surface tilting of a deflector. The Office Action has not asserted that the second scan lens 94b or the scan lens 80 correspond to a lengthy lens or perform the functions thereof. In fact, the '668 patent utilizes a cylindrical mirror 98 to attempt to correct the majority (on the order of 95%) of the surface tilt of a deflector; therefore, there is no teaching in the '668 patent to utilize the scan lens 94b as a lengthy lens. Moreover, as disclosed in col. 7, line 48, of the '668 patent, the cylindrical mirror is angled at 2.75 degrees which sub-optimally results in scanning lines on a scanned surface (photoreceptor 64) that are curved. Similarly, the cylindrical lenses 82 (Fig. 2) and 39 (Fig. 7) of the '166 patent attempt to

correct the majority (on the order of 95%) of the surface tilting, not the scan lens 80.

Accordingly, claim 6 is separately patentable over the cited prior art.

Consequently, the pending claims are believed to be patentably distinguishing over the prior art and in condition for allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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